

# NASA TECH BRIEF



NASA Tech Briefs are issued to summarize specific innovations derived from the U.S. space program, to encourage their commercial application. Copies are available to the public at 15 cents each from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151.

## Instruction Manuals for Liquid Penetrant Nondestructive Testing

Two manuals have been published which provide quality control and test personnel with basic information on liquid penetrant testing. Volume 1, a programmed instruction text with 276 pages, presents the fundamental concepts in a form suitable for individual self-instruction. It moves at the slow, careful, and very thorough pace necessary for the initial training of a person who has no previous acquaintance with the subject. Many illustrations are included. Photographs, line art, illustrative cartoons, and process flow charts reinforce the logical, page by page progression of ideas from general concepts, through equipment and procedures, to the applications and need for liquid penetrant testing.

The second volume, 129 pages in standard text format, reviews and builds on the material introduced in the first volume. It moves considerably faster and with much greater detail, in accordance with its intended use as a classroom textbook or reference work. It covers such topics as: 1. Scope of application and reasons for use of liquid penetrant testing; 2. Equipment and materials used; 3. Actual test procedures and interpretation of test results; 4. Safety precau-

tions and quality control of testing materials; and 5. Comparison of liquid penetrant testing with other nondestructive testing processes. Many photographs and drawings show the appearance of defects found both by liquid penetrant and by other nondestructive means of testing.

### Notes:

1. These manuals are basic, intended primarily for introductory training of quality control technicians. They should be useful to anyone engaged in training such personnel.

2. Documentation is available from:

Clearinghouse for Federal Scientific  
and Technical Information  
Springfield, Virginia 22151  
Reference: TSP69-10278

Source: General Dynamics  
Convair Division  
under contract to  
Marshall Space Flight Center  
(MFS-14010)

Category 05